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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,482	03/15/2004	Ramakrishna S. Budampati	H0005509 (256.193US1)	9303

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EXAMINER

GONZALEZ, AMANCIO

ART UNIT	PAPER NUMBER
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2617

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/800,482	Applicant(s) BUDAMPATI, RAMAKRISHNA S.	
	Examiner AMANCIO GONZALEZ	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/28/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 2, 5, 6, 9, 10, 13, and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oestreich (US 6445910 B1), hereafter "Oestreich," in view of Warrior et al. (US 7242294 B2), hereafter "Warrior."

Consider claim 1, Oestreich discloses a wireless network comprising multiple first wireless nodes **MS** that transmit signals (**see figs. 1, col. 3 lines 64-67**). Oestreich discloses multiple independent infrastructure nodes **BS1**, **BS2**, **BS3** that receive the transmitted signals, wherein at least two infrastructure nodes **BS1** and **BS2** receive a transmitted signal **e1** and **e2** from a single first wireless node **MS** (**see figs. 1 and 3, col. 4 lines 18-27, col. 5 lines 50-55**). Oestreich discloses a module **AE** that combines

at least two of the signals **de1** and **de2** received at the multiple independent infrastructure nodes **BS1** and **BS2** to estimate the signal transmitted by the single first wireless node **MS** (see fig. 1, col. 4 lines 27-37, col. 6 lines 1-12).

But Oestreich does not disclose a network of sensor nodes wherein the multiple independent infrastructure nodes are spaced from each other and each multiple independent infrastructure node is associated with a different set of wireless sensor nodes, or wherein the single first wireless sensor node associated with one of the at least two infrastructure nodes.

Warrior, in related art, discloses a network of sensor nodes (see the title, abstract, col. 1 lines 6-10) wherein the multiple independent infrastructure nodes (402_{N1} , 402_{N2}) are spaced from each other (*infrastructure node* read on *access point* -see fig. 4, col. 9 lines 20-57) and each multiple independent infrastructure node is associated with a different set of wireless sensor nodes (401_{N1} , 401_{N2}), wherein the single first wireless sensor node associated with one of the at least two infrastructure nodes (see col. 9 lines 22-32 and 52-57).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the invention of Oestreich with the teachings of Warrior and have it include a network of sensor nodes wherein the multiple independent infrastructure nodes are spaced from each other -*infrastructure node* read on *access point*- and each multiple independent infrastructure node is associated with a different set of wireless sensor nodes wherein the single first wireless sensor node associated with one of the at least two infrastructure nodes, thereby providing means for collecting

detailed measurements (or sensed) data about a particular local environment for the purpose of communicating said data to an application that is located remote from the wireless sensor network, as discussed by Warrior (see col. 2 lines 25-35).

Claims 10 and 16-19 as amended address the same subject matter as claim 1, therefore same rejection applies.

Consider claims 2 and 20 as amended. Oestreich as modified by Warrior teaches claims 1 and 19 above; and Oestreich further discloses a central controller BSC (see Oestreich: fig. 1 col. 4 lines 30-32).

Consider claim 5 as amended. Oestreich as modified by Warrior teaches claim 1; and Warrior further discloses wherein the first wireless nodes transmit signals that are representative of a sensed parameter (see Warrior: col. 2 lines 25-61).

Consider claims 6, 13, 15, and 21 as amended. Oestreich as modified by Warrior teaches claims 1, 10, 13, and 19 above; and Oestreich further discloses diversity techniques (see Oestreich: the title, abstract, col.1 lines 8-9 and 59-64).

Consider claim 9 as amended. Oestreich as modified by Warrior teaches claim 1; and Oestreich further discloses signal combination (see Oestreich: col. 4 lines 27-37).

4. Claims 3, 4, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oestreich (US 6445910 B1), hereafter "Oestreich," in view of Warrior et al. (US 7242294 B2), hereafter "Warrior," as applied to claims 1, 2 and 10, further in view of Ziv et al. (US 20010018347 A1), hereafter "Ziv."

Consider claims 3, 4, 11, and 12. Oestreich as modified by Warrior teaches claims 1, 2, and 10 above respectively; Oestreich further discloses connection of infrastructure nodes BS1, BS2, BS3 to the central controller BSC (see figs. 1 and 3, col. 6 lines 1-6) and Warrior further discloses wireless connection between infrastructure nodes, e.g., access points (see fig. 4, col. 9 lines 43-57); but the aforesaid combined references do not disclose said connection as being hardwired.

Ziv, in related art, discloses hardwire connection between infrastructure nodes (see par. 0023, fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the invention of Oestreich as modified by Warrior and have it describe hardwire and wireless connection between infrastructure nodes as BS1 and BS2 and the BSC, thereby applying a connection type well known in the art of communications systems.

5. Claims 7, 8, 14, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oestreich (US 6445910 B1), hereafter "Oestreich," in view of Warrior et al. (US 7242294 B2), hereafter "Warrior," as applied to claims 6, 13, and 21, further in view of Smee et al. (US Pat 6990137), hereafter "Smee".

Consider claims 7, 14, and 22 as amended. Oestreich as modified by Warrior teaches claims 6, 13, and 21 above, but does not disclose channel coefficients for combining signals.

Smee, in related art, discloses channel coefficients for combining signals (see Smee: Abstract; col. 5 lines 47-56; col. 14 lines 30-53).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the invention of Oestreich as modified by Warrior and have it include channel coefficients for combining signals, as taught by Smee, thereby providing a method for determining weight parameters to recombine diversity received signal in a wireless communication system.

Consider claims 8 and 23 as amended. Oestreich as modified by Warrior and Smee teaches claims 7 and 22 above respectively; and Oestreich further discloses diversity techniques (see Oestreich: the title, abstract, col.1 lines 8-9 and 59-64).

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Delaney Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amancio Gonzalez, whose telephone number is (571) 270-1106. The Examiner can normally be reached on Monday-Thursday from 8:00 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Charles Appiah, can be reached at (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

AG/ag

November 17, 2008

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617